

## 4th Quarterly Cost Roundup

# Hydro Costs Unaffected by Low Volume

Cost inflation doesn't necessarily slow down, much less halt, when demand slackens. That's what the Bureau of Reclamation's Denver office found when it analyzed results for the October quarter lettings of its irrigation and hydro projects.

BuRec's October composite construction cost index climbed 1.2% above its July record and capped a 7.2% increase over 12 months. The average number of bidders shrank to 4.4 per contract let, the smallest since 1951 for BuRec work in 18 western states.

Even the threat in October of a new cutback in federal construction starts didn't influence contractors to sharpen their bidding pencils. The latest quarter's lettings went at contract prices that averaged only 4.8% below BuRec cost estimates.

A partial explanation of this is that the nine jobs that were let were just too small to interest many contractors. In addition, there were some important forces at work over which contractors have no control: costs of steel, equipment and manpower.

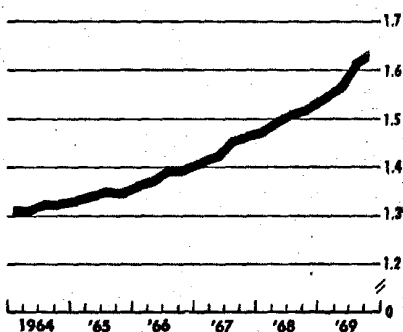
• **Plant costs soar**—Hydroelectric power plants showed an increase of 8.5% since last year. Here, steel and skilled labor costs hit plant equipment prices hardest as turbines and generators cost 11.3% more than last year.

Pumping plants experienced similar hikes, as these items cost 6.7% more than in the third quarter of 1968, and 1.6% over the previous quarter. Here, too, equipment was the guilty party, showing a 9% gain over last year at this time.

Pole and fixture prices reached an index value nearly 18% higher than

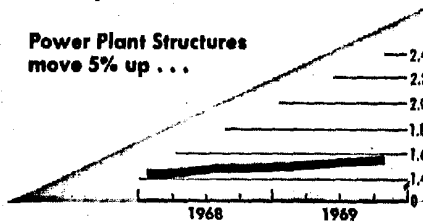
## Irrigation & Hydro Costs

Bureau of Reclamation  
Index (1949 = 1.00)

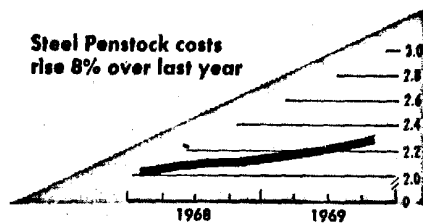


## Why Power Plants Cost More & More...

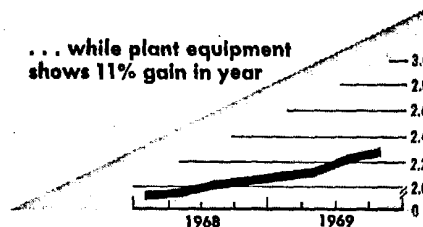
Power Plant Structures  
move 5% up ...



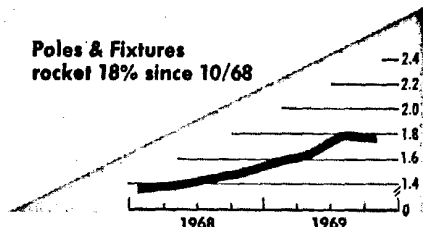
Steel Penstock costs  
rise 8% over last year



... while plant equipment  
shows 11% gain in year



Poles & Fixtures  
rocket 18% since 10/68



last year. Costs for these items may be stabilizing, however, as this quarter saw only a 1.6% gain.

• **Spending money**—The big factor for 1970 is how much BuRec will have to spend. Preliminary appropriations by the House and Senate pale before 1969's

\$277 million total. Until a joint conference of the two chambers this month, it is impossible to determine the size of the Bureau of Reclamation's budget next year. One thing is certain: there won't be enough money for everyone, and contractors may have to sharpen pencils in order to keep working in this area.

## Irrigation and Hydroelectric Cost\* Indexes

U.S. Bureau of Reclamation, Denver, Colo., 1949-51 = 1.0

	October			1969			% Changes	
	1966	1967	1968	Apr.	Jul.	Oct.	Oct. '68 - Oct. '69	Jul. '69 - Oct. '69
<b>COMPOSITE INDEX</b>								
DAMS Earth	1.40	1.47	1.53	1.57	1.62	1.64	+7.2	+1.2
Dam structure	1.22	1.29	1.35	1.37	1.40	1.42	+5.2	+1.4
Spillway	1.00	1.06	1.09	1.11	1.13	1.14	+4.6	+0.9
Outlet works	1.40	1.48	1.57	1.61	1.65	1.68	+7.0	+1.8
Concrete	1.58	1.67	1.78	1.82	1.89	1.94	+9.0	+2.6
Diversion	1.23	1.28	1.35	1.38	1.42	1.45	+5.9	+0.7
Diversions	1.54	1.60	1.67	1.71	1.76	1.78	+6.6	+1.1
<b>PUMPING PLANTS</b>								
Building & Equipment	1.62	1.70	1.78	1.82	1.87	1.90	+6.7	+1.6
Structure, rein conc. & improv.	1.42	1.45	1.51	1.53	1.56	1.57	+4.0	+0.6
Equipment	1.95	2.07	2.21	2.26	2.36	2.41	+9.0	+2.1
Pumps & prime equip.	1.98	2.10	2.24	2.29	2.39	2.45	+9.4	+2.5
accessory elec. & misc. equip.	1.85	1.97	2.10	2.15	2.24	2.29	+9.0	+2.2
<b>STEEL PENSTOCKS, DISCHARGE PIPES, CANALS</b>								
Earthwork	1.97	2.06	2.15	2.21	2.27	2.32	+7.9	+2.2
Structures	1.21	1.25	1.29	1.32	1.35	1.36	+5.4	+0.7
CONDUITS (tunnels, conc-lined)	1.12	1.19	1.22	1.26	1.30	1.31	+7.4	+0.8
LATERALS & DRAINS	1.28	1.31	1.35	1.37	1.40	1.41	+4.4	+0.7
Earthwork	1.32	1.34	1.37	1.40	1.41	1.42	+3.6	+0.7
Structures	1.37	1.41	1.46	1.48	1.50	1.51	+3.4	+0.7
Earthwork	1.03	1.07	1.11	1.15	1.18	1.19	+7.2	+0.8
Structures	1.57	1.61	1.65	1.67	1.69	1.70	+3.0	+0.6
<b>POWER PLANTS, HYDRO</b>								
Building & Equipment	1.69	1.79	1.89	1.94	2.02	2.05	+8.5	+1.5
Structure, rein conc. & improv.	1.43	1.46	1.52	1.55	1.58	1.59	+4.6	+0.6
Equip.	1.82	1.93	2.08	2.15	2.26	2.31	+11.1	+2.2
turbines & generators	1.81	1.95	2.12	2.19	2.31	2.36	+11.3	+2.2
accessory electrical equip.	1.71	1.82	1.91	1.95	2.02	2.06	+7.9	+2.0
miscellaneous equip.	1.75	1.85	1.96	2.02	2.11	2.15	+9.7	+1.9
PIPELINES, concrete	1.36	1.44	1.47	1.49	1.52	1.53	+4.1	+0.7
SWITCHYARDS & SUBSTATIONS	1.80	1.91	1.99	2.04	2.09	2.12	+6.5	+1.4
<b>TRANSMISSION LINES</b>								
Wood-pole, 115-kv.	1.41	1.45	1.56	1.65	1.75	1.74	+11.5	-0.6
poles and fixtures	1.33	1.36	1.52	1.68	1.82	1.79	+17.8	-1.6
conductors, devices	1.45	1.51	1.58	1.60	1.66	1.67	+5.7	+0.6
Steel-tower, 230 kv.	1.65	1.74	1.81	1.86	1.90	1.92	+6.1	+1.1
<b>GENERAL PROPERTY-BUILDINGS</b>								
ROADS, Primary	1.65	1.74	1.84	1.90	1.99	2.02	+9.8	+1.5
Secondary (unsurfaced)	1.35	1.39	1.45	1.49	1.52	1.53	+5.5	+0.7
BRIDGES, Steel	1.37	1.41	1.49	1.53	1.55	1.57	+5.4	+1.3
	1.72	1.79	1.86	1.90	1.95	1.98	+6.5	+1.5

\* Project cost (combined materials & labor) to Fed. govt of U. S. BuRec projects in 18 western states incl. Alaska